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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Kevin Ivers

EPARK-1

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1218 7590 11/17/2008  
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EXAMINER

ARAQUE JR, GERARDO

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/049,484	<b>Applicant(s)</b> IVERS, KEVIN	
	<b>Examiner</b> Gerardo Araque Jr.	<b>Art Unit</b> 3689	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 17-25 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-25 and 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1 – 2 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang (US Patent 4,847,776)** in view of **Ferguson (US Patent 6,184,969 B1)**.

3. In regards to **claim 1**, **Huang** discloses an electronic apparatus for use in a parking system, said apparatus comprising:

a housing (**Fig. 1: 1**);

a microcomputer disposed within said housing, said microcomputer further comprising at least one memory for storing parking parameters and credits (**Fig. 2; Col. 2 Lines 43 – 50**);

a time monitoring crystal electrically coupled to said microcomputer to generate accurate timekeeping, wherein the microcomputer debits the stored credits based on the stored parking parameters and time (**Col. 2 Lines 43 – 50; Col. 3 Line 3**);

a display means for displaying human readable information electrically coupled to and controlled by said microcomputer, said display means externally located on a face of said housing (**Fig. 1: 3**);

at least one momentary switch for operating said apparatus (**Fig. 1: 22, 23, 24**);  
and

a battery to power to said apparatus (**obviously included**).

**Huang** discloses the use of an LCD screen as part of the parking meter, but fails to explicitly teach an LCD screen:

wherein said display means includes a controllable segment configured to allow light to pass through said display means when the controllable segment is off and blocks light from passing through said display means when the controllable segment is on; and

a corner cube disposed behind the controllable segment of said display means configured to reflect light back to its source external of the apparatus when the controllable segment is off, wherein upon light being directed at said display means by the source external to the apparatus, the controllable segment is turned on and off at a serial data rate by said microcomputer to passively transmit status and parking-related data from said apparatus by modulating on and off the light reflected by the corner cube.

However, **Ferguson** discloses that reflective-type LCD screens are old and well known in the art as well as modulating the light being transmitted through the apparatus (**Col. 2 Lines 1 – 34; Col. 6 Lines 44 – 49; Col. 7 Lines 1 – 3**). Moreover, **Ferguson** also discloses that it is also old and well known to use corner cubes as the reflective material of such a system (**Col. 46 Lines 18 – 67; Col. 47 Lines 10 – 15**).

Consequently, the Examiner asserts that one of ordinary skill in the art looking up the teachings of **Huang** would have known that it is old and well established to use an LCD in an in car parking meter and based on the teachings of **Ferguson** it is old and well

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established that there are a variety of different types of LCD screens with their respective components. With that said, the Examiner also asserts that with the change in technological advancements towards wireless transmission of information it would have been obvious that the benefits of having an in car parking meter with wireless data transmission using a corner cube would have greatly accelerated the acquisition of parking related information from in car parking meters. As a result, all of the component parts are known in **Huang** and **Ferguson**. The only difference is the combination of the “old elements” into a single device by mounting them on a single chassis. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the combination of **Huang** with the teachings of **Ferguson** to include a reflective-type LCD screen for a system that requires transmission through an LCD.

Further still, the Examiner further asserts that it is old and well known for LCD's to have a refresh rate and that the refresh rate is controlled by a microcomputer. With that said, the Examiner asserts that the **combination of Huang and Ferguson** does, indeed, disclose the transmission of data by modulating on and off the light reflected by the corner cube since it is obviously included that an LCD screen contains a refresh rate which would prevent data from transmitting when it is on (not transparent) and allow data to be transmitted when it is off (transparent) since the refresh rate is a safety measurement taken to prevent burning (imprinting) images on an LCD.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the LCD as taught by the **combination of Huang and Ferguson** to have the microcomputer control the transmission of data by modulating on

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and off the light reflected by the corner cube since it is an obvious feature in LCD screens.

4. In regards to **claims 2**, **Huang** discloses further comprising four momentary switches for entering data and programming said apparatus (**Fig. 1: 21**).

5. In regards to **claim 13**, **Huang** discloses wherein said apparatus is disposed in an automobile such that said display means can be viewed from a location external to said automobile (**Col 4 Lines 30 – 36**).

6. **Claims 3 – 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang (US Patent 4,847,776)** in view of **Ferguson (US Patent 6,184,969 B1)** in further view of **Jacobs (US Patent 6,195,015 B1)**.

7. In regards to **claim 3**, **the combination of Huang and Ferguson** fails to disclose further comprising an infrared serial interface coupled to said microcomputer, said interface includes a light emitting diode and an infrared diode used to send and receive data through said face of said housing.

**Huang**, however, does disclose that the parking meter is capable of communicating with other devices (**Fig. 7**). However, because of the lack of sufficient technological advancements the device does not have diodes to send and receive data.

However, **Jacobs**, discloses a parking meter with light emitting and infrared diodes for sending and receiving data through said face (**Fig. 2: 22, 23, 234**). **Jacobs** discloses that the diodes will allow the information to be transmitted to parking authority enforcement and auditor personnel and allow for a more visible method of displaying information, such as an expiration indication (**Col. 5 Lines 10 – 20; see also Col. 1**

**Lines 37 – 47; Col. 13 – 14 Lines 60 – 59).** As can be seen in **Jacobs**, technological advancement have allowed for new methods of sending and receiving data.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **the combination of Fergason and Huang's** parking meter in view of the teachings of **Jacobs** to allow for a more efficient manner of transmitting information between a parking authority and the parking meter.

8. In regards to **claim 4, the combination of Huang and Jacobs** disclose wherein said microcomputer further comprises an internal read-only memory (ROM) with a capacity of 16K words for storing programs, bit maps and tables (**Huang Fig. 2: 42; Jacobs Col. 9 Lines 42 – 47**).

9. In regards to **claim 5, the combination of Huang and Jacobs** disclose wherein said microcomputer further comprises an internal random access memory (RAM) with a capacity of 3500 nibbles for storing parking parameters and random code words (**Huang obviously included; Jacobs Col. 9 Lines 42 – 47**)..

10. In regards to **claim 6, the combination of Huang and Jacobs** discloses wherein said microcomputer further comprises an internal clock divider to generate  $\frac{1}{2}$  Hz and 1/16 Hz clock signals (**obviously included in order to keep accurate measurements of time**).

11. In regards to **claim 7, Jacobs** discloses wherein said microcomputer further comprises an internal battery checking circuit (**Col. 9 Lines 59 – 61**).

12. In regards to **claim 8, the combination of Huang and Jacobs** discloses wherein said crystal operates at 32,768 kHz (**obviously included in order to keep accurate measurements of time; see also Jacobs Col. 9 Lines 59 – 61**).

13. In regards to **claim 9, Jacobs** discloses wherein said display is a liquid crystal display (LCD) (**Fig. 1: 232**).

14. In regards to **claim 10**, although **the combination of Huang and Jacobs** does not disclose wherein said liquid crystal display comprises 1024 pixels organized as an array of 16 rows by 64 columns it would have been obvious from an engineering design choice to create an appropriately sized LCD to fit the device accordingly.

15. In regards to **claim 11, Jacobs** discloses further comprising a temperature sensing circuit, said temperature sensing circuit includes a NTC thermistor, a resistor and a capacitor connected in parallel (**Col. 9 Lines 49 – 52; although Jacobs does not disclose the type of temperature sensing circuit, one skilled in the art would have found it obvious to create a temperature sensing circuit that would meet the requirements of a specific project**).

16. In regards to **claim 12, the combination of Huang and Jacobs** discloses wherein said microcomputer further comprises an LCD electrical interface coupling said microcomputer to said liquid crystal display, said LCD interface controls bias voltages to said liquid crystal display in response to an input to said microcomputer from said temperature sensing circuit (**Huang Fig. 2; Jacobs Fig. 18 D**).



17. In regards to **claim 14, the combination of Huang and Fergason** fails to disclose further comprises a motion detecting means, said motion detecting means terminates active parking upon detecting motion.

However, **Jacobs** discloses that it is old and well known for parking meters to contain motion-detecting devices (**Col. 7 – Col. 9**). **Jacobs** discloses that one of the uses of having a motion-detecting device on a parking meter is to alert an individual on the status of the parking meter, i.e. whether the parking meter has expired.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **the combination Huang and Fergason** in view of the teachings of **Jacobs** to include a motion-detecting device on a parking meter in order to alert an individual on the status of the parking meter.

18. **Claims 17 – 25 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Huang (US Patent 4,847,776)** in view of **Fergason (US Patent 6,184,969 B1)** in further view of **Jacobs (US Patent 6,195,015 B1)**.

19. In regards to **claims 17 and 23, Huang** discloses an electronic parking system, said system comprising:

an in-car parking meter having a first data transferring means and a display for displaying human readable information, said meter being disposed in an automobile such that said meter can be viewed from a location external to said automobile (**Huang Fig. 7**), and

an external transceiver having a second data transferring means, said second data transferring means configured to communicate with said first transferring means of said in-car parking meter (**Huang Fig. 7**).

**Huang** discloses the use of an LCD screen as part of the parking meter, but fails to explicitly teach an LCD screen:

wherein a controllable segment of the display configured to allow light to pass through said display when the controllable segment is off and blocks light from passing through said display when the controllable segment is on and a reflector disposed behind the controllable segment of said display configured to reflect light back to a source external of the apparatus when the controllable segment is off, wherein upon light being directed at said reflector, the controllable segment is turned on and off to serially transmit status and parking-related data from said apparatus, and

However, **Ferguson** discloses that reflective-type LCD screens are old and well known in the art as well as modulating the light being transmitted through the apparatus (**Col. 2 Lines 1 – 34; Col. 6 Lines 44 – 49; Col. 7 Lines 1 – 3**). Moreover, **Ferguson** also discloses that it is also old and well known to use corner cubes as the reflective material of such a system (**Col. 46 Lines 18 – 67; Col. 47 Lines 10 – 15**).

Consequently, the Examiner asserts that one of ordinary skill in the art looking up the teachings of **Huang** would have known that it is old and well established to use an LCD in an in car parking meter and based on the teachings of **Ferguson** it is old and well established that there are a variety of different types of LCD screens with their respective components. With that said, the Examiner also asserts that with the change

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in technological advancements towards wireless transmission of information it would have been obvious that the benefits of having an in car parking meter with wireless data transmission using a corner cube would have greatly accelerated the acquisition of parking related information from in car parking meters. As a result, all of the component parts are known in **Huang** and **Ferguson**. The only difference is the combination of the “old elements” into a single device by mounting them on a single chassis. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the combination of **Huang** with the teachings of **Ferguson** to include a reflective-type LCD screen for a system that requires transmission through an LCD.

Further still, the Examiner further asserts that it is old and well known for LCD's to have a refresh rate and that the refresh rate is controlled by a microcomputer. With that said, the Examiner asserts that the **combination of Huang and Ferguson** does, indeed, disclose the transmission of data by modulating on and off the light reflected by the corner cube since it is obviously included that an LCD screen contains a refresh rate which would prevent data from transmitting when it is on (not transparent) and allow data to be transmitted when it is off (transparent) since the refresh rate is a safety measurement taken to prevent burning (imprinting) images on an LCD.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for the LCD as taught by the **combination of Huang and Ferguson** to have the microcomputer control the transmission of data by modulating on and off the light reflected by the corner cube since it is an obvious feature in LCD screens.

The **combination of Huang and Fergason** fails to disclose:

an external receiver, said external receiver comprising a light point source for directing light at said display and a photo detector for receiving said status and parking-related data from said in-car parking meter by detecting the modulated light reflected by the reflector.

**Huang** discloses that the parking meter is capable of communicating with other devices (**Fig. 7**). Because of the lack of sufficient technological advancements the device does not have diodes to send and receive data.

**Jacobs** discloses a parking meter with light emitting and infrared diodes for sending and receiving data through said face (**Fig. 2: 22, 23, 234**). **Jacobs** further discloses a hand held computer used by the parking authority. One of the uses of the hand held computer is to communicate with the meter via the infrared transmitter in the officer's hand held computer (**Column 14 Lines 38 – 41; see also Columns 13 – 14 Lines 60 – 59**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **the combination of Huang and Fergason** in view of the teachings of **Jacobs** to include a hand held computer to communicate with the parking meter in order to better able to control cost and allow for a parking enforcement officer to search for information relating to a vehicle.

20. In regards to **claim 18**, **Huang** discloses an electronic apparatus for use in a parking system, said apparatus comprising:

a housing (**Fig. 1: 1**);

a microcomputer disposed within said housing (**Fig. 2**);  
a time monitoring crystal electrically coupled to said microcomputer to generate accurate timekeeping (**Col. 3 Line 3**);  
a display means electrically coupled to said microcomputer, said display means externally located on a face of said housing (**Fig. 1: 3**);  
at least one momentary switch for operating said apparatus (**Fig. 1: 22, 23, 24**);  
and  
a battery to power to said apparatus (**obviously included**).

21. In regards to **claim 19**, **Huang** discloses further comprising four momentary switches for entering data and programming said apparatus (**Fig. 1: 21**).

22. In regards to **claims 20 and 25**, **Huang** fails to disclose further comprising an infrared serial interface coupled to said microcomputer, said interface includes a light emitting diode and an infrared diode used to send and receive data through said face of said housing.

**Huang** discloses that the parking meter is capable of communicating with other devices (**Fig. 7**). However, because of the lack of sufficient technological advancements the device does not have diodes to send and receive data.

However, **Jacobs**, discloses a parking meter with light emitting and infrared diodes for sending and receiving data through said face (**Fig. 2: 22, 23, 234**). **Jacobs** discloses that the diodes will allow the information to be transmitted to parking authority enforcement and auditor personnel and allow for a more visible method of displaying information, such as an expiration indication (**Col. 5 Lines 10 – 20; see also Col. 1**

**Lines 37 – 47; Col. 13 – 14 Lines 60 – 59).** As can be seen in **Jacobs**, technological advancement have allowed for new methods of sending and receiving data.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **the combination Fergason and Huang's** parking meter in view of the teachings of **Jacobs** to allow for a more efficient manner of transmitting information between a parking authority and the parking meter.

23. In regards to **claims 21 and 22, Huang** fails to disclose further comprising an external receiver, said external receiver comprising a light point source and a photo detector which when directed toward said in-car parking meter passively receives information form said in-car parking meter.

**Huang** disclose that the parking meter is capable of communicating with other devices (**Fig. 7**). However, because of the lack of sufficient technological advancements the device does not have diodes to send and receive data.

However, **Jacobs**, discloses a parking meter with light emitting and infrared diodes for sending and receiving data through said face (**Fig. 2: 22, 23, 234**). **Jacobs** further discloses a hand held computer used by the parking authority. One of the uses of the hand held computer is to communicate with the meter via the infrared transmitter in the officer's hand held computer (**Column 14 Lines 38 – 41; see also Columns 13 – 14 Lines 60 – 59**).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **the combination of Huang and Fergason** in view of the teachings of **Jacobs** to include a hand held computer to communicate with the

parking meter in order to better able to control cost and allow for a parking enforcement officer to search for information relating to a vehicle.

24. In regards to **claim 24**, **Huang** fails to disclose wherein said transceiver is positioned at an entrance to a parking facility.

However, as already discussed above, **Jacobs** discloses a parking meter with light emitting and infrared diodes for sending and receiving data through said face (**Fig. 2: 22, 23, 234**). **Jacobs** discloses that the diodes will allow the information to be transmitted to parking authority enforcement and auditor personnel and allow for a more visible method of displaying information, such as an expiration indication (**Col. 5 Lines 10 – 20; see also Col. 13 – 14 Lines 60 – 59**). It is old and well known for parking authority enforcement to be located anywhere within a parking facility. Moreover, it would have also been obvious to have the transceiver located at the entrance of a parking facility in order for the parking authority enforcement to properly register when the in-car parking meter enters and leaves the parking facilities.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify **the combination of Huang and Fergason** in view of the teachings of **Jacobs** to have the transceiver located at the entrance of a parking facility in order for the parking authority enforcement to properly register when the in-car parking meter enters and leaves the parking facility.

25. In regards to **claim 29**, **Jacobs** discloses wherein said external transceiver is portable, said external transceiver being carried by a parking enforcement official to read data from said in-car parking meter (**Columns 13 – 14 Lines 60 – 59**).

***Response to Arguments***

26. Applicant's arguments with respect to **claims 1 – 14, 17 – 25 and 29** have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerardo Araque Jr. whose telephone number is (571)272-3747. The examiner can normally be reached on Monday - Friday 8:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on (571) 272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/G. A./  
Examiner, Art Unit 3689  
11/10/08

/Janice A. Mooneyham/  
Supervisory Patent Examiner, Art Unit 3689